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| APPLICATION NO.            | FILING DATE | FIRST NAMED INVENTOR       | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------------------|-------------|----------------------------|---------------------|------------------|
| 10/596,017                 | 08/17/2006  | Marie Thomas Gilles Raffle | 20997-003US1 F20137 | 1760             |
| 26161 7590 10/10/2008      |             |                            |                     |                  |
| FISH & RICHARDSON PC       |             |                            |                     |                  |
| P.O. BOX 1022              |             |                            |                     |                  |
| MINNEAPOLIS, MN 55440-1022 |             |                            |                     |                  |
| EXAMINER                   |             |                            |                     |                  |
| LIN, KUANG Y               |             |                            |                     |                  |
| ART UNIT                   |             | PAPER NUMBER               |                     |                  |
| 1793                       |             |                            |                     |                  |
| NOTIFICATION DATE          |             | DELIVERY MODE              |                     |                  |
| 10/10/2008                 |             | ELECTRONIC                 |                     |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

**Office Action Summary****Application No.**

10/596,017

**Applicant(s)**

RAFFLE, MARIE THOMAS GILLES

**Examiner**

Kuang Y. Lin

**Art Unit**

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

1. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,842,038 to Fujino et al. in view of UK 2,160,456 and further in view of DE 37 26 217.

Fujino et al. substantially show the invention as claimed except that they do not show to use heat spaced from the die for heating the same. However, UK '456 shows to heat the different portions of the casting mold during casting process such that to obtain a casting product of better quality. It would have been obvious to heat the appropriate portions of the casting mold in the process of Fujino et al. as taught by UK '456 to obtain a casting product of better quality. Further, DE '217 discloses a method of heating a metal die by induction heating coil. The induction coil is either laid externally around the die or is laid in the die. Thus, to place the heating means of UK '456 externally around the die is deemed to be nothing more than an obvious matter of design choice in view of DE '217. Since the different mold cavity regions required different thermal input, it would have been obvious to individually control the power input to each coil such that to better control the temperature in each mold cavity region. With respect to claims 2, 3 and 14, it is conventional to provide an inert gas environment during casting process such that to prevent the molten metal from oxidizing. With respect to claim 5, it would have been obvious to obtain the optimal injection pressure, which depends on the size of the injection die casting machine, the size and the configuration of the article to be cast, the alloy composition, etc., through routine experimentation. With respect to claim 8, it is conventional to use injection casting mold for casting vehicle wheel rim (see, for example, JP 4-200,841).

With respect to claim 9, it would have been obvious to use the injection die casting apparatus of Fujino et al. for cast article of any configuration. With respect to claims 11 and 19, it would have been obvious to provide as many casting stations and melting stations as it is needed to speed up the casting process. With respect to claim 18, the use of a wheel-rail in lieu of a carousel conveying apparatus presents no novel or unexpected result and solves no stated problem and would have been obvious to those of ordinary skill in the casting art, *In re Kuhle*, 188 USPQ 7.

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thornton*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-19 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, 4-14 and 17-20 of copending Application No. 10/596,015. Although the conflicting claims are not

identical, they are not patentably distinct from each other because the claimed disclosure of the copending application discloses the invention as claimed.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

4. Applicant's arguments filed September 19, 2008 have been fully considered but they are not persuasive.

a. Applicant in pages 8 and 9 of the response stated that neither US '038 to Fujino nor UK '456 to Cortina shows the claimed feature of providing a unitary circumferential heating element spaced from a die or mold. However, figure 1 of DE '217 to Valliant does show that feature. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

b. Applicant in page 9, last para. of the response stated that the examiner failed to show the support for his previous contention that the heating of different portions of the casting mold during Cortina's casting process to obtain a casting product of better quality. However, the entire disclosure of Cortina is directed to the concept of heating different portions of casting mold such that the molten metal in the riser (excess metal component 3) may be maintained in the molten state for feeding the space in cast component (4) due to solidification shrinkage

(see, for example, page 1, lines 66-124). The casting product of this process has less solidification porosity due to better feeding of molten metal.

c. Applicant in page 10, 2<sup>nd</sup> para. of the response stated that Cortina does not disclose circumferential coils controllable independently of each other to heat a die or mold. However, the main objective of Cortina is to solidify the component 3 last such that the molten metal therein can be used to feed the space in cast component 4 due to solidification shrinkage. The heat input to component 3 is different from that input to component 4 due to different mass as well as different solidification time. Thus, it requires different power input to different coils for properly control the sequence of solidification for different portions of the casting.

d. Applicant in page 10, 4<sup>th</sup> para. of the response stated that DE '217 to Vaillant appears to show a heating coil 9 that is separable as mold halves 2, 3 separate to allow access to cavity. However, it is conventional to use a unitary circumferential heating element for heating a mold (see, for example, figures 4 and 6 of EP 100,272, cited in the co-pending application S.N. 10/596,015). Thus, applicant's assumption is not deemed to be persuasive.

5. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued

examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuang Y. Lin whose telephone number is 571-272-1179. The examiner can normally be reached on Monday-Friday, 10:00-6:30,.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jessica L. Ward can be reached on 571-272-1223. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kuang Y. Lin/  
Primary Examiner, Art Unit 1793

9-30-08